



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,333	12/15/2003	Nagalinga Durga Prasad Sripathi Panditharadhya	MSFT-2754/304830.01	3726

41505 7590 03/30/2007
WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)
CIRA CENTRE, 12TH FLOOR
2929 ARCH STREET
PHILADELPHIA, PA 19104-2891

EXAMINER

HUYNH, CONG LAC T

ART UNIT	PAPER NUMBER
----------	--------------

2178

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/736,333

Applicant(s)

PANDITHARADHYA ET AL.

Examiner

Cong-Lac Huynh

Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 5-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/26/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: RCE filed 1/15/07 to the application filed on 12/15/03.
2. Claim 21 is added.
3. Claims 1-21 are pending in the case. Claims 1, 5, 13 and 21 are independent claims.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 5 recites the limitation "the user" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
8. Claims 5-12 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 5-12, as amended, are directed to a computer readable medium having stored thereon computer executable instructions for defining an XML schema that describing a non-XML data stream. According to the specification of the instant application, the computer readable medium includes both computer readable storage medium and the transmission media ([0030]). A computer readable medium of transmission media, which includes signal and carrier waves, has the 101 issue.

Therefore, to limit the claim only on the storage medium and to overcome the 101 issue, it is suggested to replace the phrase "A computer-readable medium" with "A computer-readable storage medium."

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuh et al. (US Pat App Pub No 2004/0073870, 4/15/04, priority 10/15/02) in view of Belfiore et al. (US 2002/0059425).

Regarding independent claim 13, Fuh discloses:

- providing assemblies containing implementation to extend a functionality of a schema compiler ([0029], [0035]: providing the Annotated Automation Encoding

format with the addition of annotations, which is attributes for element nodes in the XML schema tree shows assemblies with implementation to extend a functionality of the XML schema compiler)

- referencing definitions of interfaces for exposing extended functionalities to said schema (figures 3, 5)
- adding custom properties to elements and attributes in the XML schema ([0029], [0036], figures 3, 5: adding additional annotations, which are attributes and data type constraints for the element nodes, to the XML schema tree shows additional properties added to elements of an XML schema)

Fuh does not explicitly disclose the schema editor. However, Fuh does teach the XML schema compiler which receives XML schema definition as input and generates a structured hierarchy for the XML schema definition and represents it in an annotated tree ([0034]-[0036]).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Fuh to include a schema editor since the feature in Fuh implies that the schema is added with annotations, and thus modified. This suggests that the XML schema compiler further has a role of an editor.

Fuh also does not disclose that the custom properties defining characteristics of non-XML data within XSD schemas.

Belfiore discloses receiving non-XML data and converting it into XML data ([0082].

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Belfiore into Fuh for the following reason. Belfiore

Art Unit: 2178

discloses the ability of converting non-XML data into XML data thus providing the advantage to incorporate into the custom properties of XML elements in the XML schema in Fuh for having the custom properties defining characteristics of non-XML data within XSD schemas. The attribute/characteristics of XML data when converted from non-XML data would include attributes/characteristics of non-XML data but in XML format. Combining Belfiore into Fuh would provide a XML data necessary for a XML schema where the source of the XML data is from a plurality of non-XML data documents that need to be converted to XML for a specific purpose using the effectiveness of XML language.

Regarding claim 14, which is dependent on claim 13, Fuh discloses that said extended functionalities include additional properties added to elements and attributes of an XML schema ([0029], figures 3, 5: additional attributes via annotations in the XML schema tree shows additional properties added to elements of an XML schema).

Regarding claim 15, which is dependent on claim 14, Fuh discloses providing a property manager that implements an interface to define custom properties for said elements and attributes ([0035]: defining attributes of the element nodes where the attributes are considered custom properties implies that there is a properties manager for performing said function).

Art Unit: 2178

Regarding claim 16, which is dependent on claim 15, Fuh discloses storing said custom properties within said XML schema (figure 3, #308).

Regarding claim 17, which is dependent on claim 15, Fuh discloses annotating said XML schema to describe XML data streams (figure 3, [0040], [0041]).

Fuh does not disclose that the XML data streams are converted from non-XML data.

Belfiore shows that XML data can be converted from non-XML data ([0082]: receiving non-XML data and converting it into XML data)..

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Belfiore into Fuh for the following reason. Belfiore discloses converting non-XML data into XML data thus providing the advantage to incorporate into the XML schema for XML data in the Fuh for annotating the XML schema to describe non-XML data within XSD schemas since the XML data used by the XML schema and its characteristics can be converted from a non-XML data.

Regarding claim 18, which is dependent on claim 15, Fuh discloses providing a validator to validate said custom properties ([0047], [0048][0064], [0071], [0072]).

Regarding claim 19, which is dependent on claim 15, Fuh discloses providing an instance generator for generating an instance of said XML schema (figure 5).

Regarding claim 20, which is dependent on claim 13, Fuh discloses annotating a schema being edited by said schema editor to include information about said extended

functionalities ([0033]-[0035]: annotations for XML schema shows annotating a schema which is edited to include attributes of sub-elements, which are considered information about extended functionalities).

Regarding independent claim 5, Fuh discloses:

- an instance tree view (figure 5)
- a text view of said XML schema (figure 5)
- a properties view (figure 5: nodes in the tree with properties such as String, Integer)
- wherein to construct a schema, a user creates a simple hierarchical tree structure in the instance tree (figure 5)
- properties associated with XML data are entered via said properties view to define characteristics of data contained within XML data ([0029], [0036])

Fuh does not disclose that the properties associated with said non-XML data stream are entered via said properties view to define characteristics of data contained within said non-XML data stream.

Belfiore shows that XML data can be converted from non-XML data ([0082]: receiving non-XML data and converting it into XML data).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Belfiore into Fuh for the following reason. Belfiore discloses converting non-XML data into XML data thus providing the advantage to incorporate into for the XML data of the XML schema in Fuh for entering properties

Art Unit: 2178

associated with the XML data to describe non-XML data within XSD schemas since the XML data used by the XML schema and its characteristics when converted from a non-XML data still include characteristics of non-XML data but in XML format.

Regarding claim 7, which is dependent on claim 5, Fuh discloses that said specific properties comprises XSD properties ([0029]).

Regarding claim 8, which is dependent on claim 5, Fuh discloses that maintaining extensibility mechanism wherein said properties for specific nodes associated with differing types of XML data are specified ([0037]-[0038]).

Fuh does not disclose said maintaining for non-XML data.

Belfiore shows that XML data can be converted from non-XML data ([0082]: receiving non-XML data and converting it into XML data).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Belfiore into Fuh for the following reason. Belfiore discloses converting non-XML data into XML data thus providing the benefit to incorporate into the XML data for the XML schema in Fuh for having a XML data converted from a non-XML data to be maintained.

Regarding claim 9, which is dependent on claim 8, Fuh discloses maintaining a custom view for adding properties to each node that appear in said properties view ([0036]-[0038], figure 5).

Art Unit: 2178

Regarding claim 10, which is dependent on claim 5, Fuh discloses maintaining a validation mechanism, and an instance generation mechanism ([0039], figures 7-8).

Regarding claim 11, which is dependent on claim 10, Fuh discloses that said schema is validated from a XML perspective ([0039], [0048]-[0051]).

Fuh does not disclose that said schema is validated from a non-XML perspective.

Belfiore shows obtaining XML data from non-XML data ([0082]: receiving non-XML data and converting it into XML data).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Belfiore into Fuh for the following reason. Belfiore discloses obtaining XML data from non-XML data into XML data thus providing the advantage to incorporate into the XML data for the XML schema in Fuh for validating a XML schema from a non-XML perspective since XML data and its characteristics can be converted from a received non-XML data. This suggests having a schema to be validated from a non-XML perspective.

Regarding claim 12, which is dependent on claim 10, Fuh discloses a sample instance data is generated from said XML schema containing data from said XML data ([0039]).

Fuh does not disclose a sample instance data is generated from said XML schema containing data from a non- XML data stream.

Belfiore discloses obtaining XML data from non-XML data ([0082]: receiving non-XML data and converting it into XML data).

Art Unit: 2178

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Belfiore into Fuh for the following reason. Belfiore discloses obtaining XML data from non-XML data thus providing the advantage to incorporate into the XML data in the XML schema in Fuh for having instance data that is generated from said XML schema containing data converted from a non-XML data stream.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuh in view of Belfiore as applied in claim 5 above, and further in view of Allen et al. (US 6,151,568).

Regarding claim 8, which is dependent on claim 5, Fuh does not disclose a color-code view of a portion of said XML-schema associated with a particular node.

Allen discloses assigning colors for each particular node in the tree (col 9, line 65 to col 10, line 13).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Allen into Fuh for easily recognizing a particular node in a tree thanks to the associated colors assigned to the nodes.

Allowable Subject Matter

12. Claims 1-4, 21 are allowed.

13. The following is a statement of reasons for the indication of allowable subject matter: including delimitation nodes within said XML schema that defines delimiting

Art Unit: 2178

characteristics of a non-XML data stream where the delimitation nodes are child nodes in the XML schema, where instances of the content nodes in the XML instances are intended to contain portions of the non-XML stream that are delineated by the delimiting portions of the non-XML data stream, and generating the instances of the content nodes containing the identified content portions of the non-XML data stream, where the instances of content nodes contain respective content portions identified by delimitation nodes of the corresponding content nodes in the XML schema, where the delimiting portions matched to the delimitation nodes are not included in the XML instance, were not disclosed in the prior art of record.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lewis (US 2002/0111924).

Atkinson (US 2004/0098667).

Aridor et al. (US 2004/0215650).

Franke et al. (US 4,710,763).

Kane et al., Consistently Updating XML Documents Using Incremental Constraint Check Queries, ACM 2002, pages 1-8.

Glushko et al., Document Engineering for e-Business, ACM 2002, pages 42-48.

Art Unit: 2178

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cong-Lac Huynh whose telephone number is 571-272-4125. The examiner can normally be reached on Mon-Thurs (9:00-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Cong-Lac Huynh
Primary Examiner
Art Unit 2178
3/20/07